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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/686,917	10/09/2000	Seung-Ho Hong	MESO0026	5486

7590

10/05/2004

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EXAMINER

DOROSHENK, ALEXA A

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/686,917

Applicant(s)

HONG ET AL.

Examiner

Alexa A. Doroshenk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) 12-31 and 51-69 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32-50 is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/16/01 & 4/5/03.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Claims 1-11 and 32-50 in the reply filed on July 15, 2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1- 8, 10 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Call et al. (6,488,900).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

With respect to claim 1, Call et al. discloses an integrated thermal treatment system for a fluid comprising a counter-flow heat exchanger (202) disposed adjacent to a thermal reactor (200) wherein the heat exchanger comprises a plurality of channels where incoming fluid enters alternating channels and treated fluid flows counter-currently through the remaining channels after passing through the thermal reactor (200) (col. 12, lines 27-56).

With respect to claims 2 and 3, Call et al. further disclose wherein the housing of the apparatus is insulated and wherein the insulation can comprise aerogel panels (col. 10, line 66- col. 11, line 6 and col. 11, lines 33-45).

With respect to claim 4, Call et al. further disclose wherein catalytic elements may be disposed within reaction channels (col. 12, line 67- col. 13, line 3).

With respect to claim 5, Call et al. further disclose wherein the catalyst treatment zone comprises a noble metal catalyst (col. 2, lines 27-31).

With respect to claims 6 and 8, no structural limitations are claimed, only an operational condition. The claims continue to read on the apparatus of Call et al. because an apparatus claim covers what a device is, not what a device does. MPEP 2114.

With respect to claim 7, Call et al. further disclose wherein the thermal treatment zone comprises at least one electric resistive heating element (col. 2, lines 49-51).

With respect to claim 10, Call et al. further disclose wherein the channels are defined between a plurality of sheets stacked together in spaced-apart layers so that a

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gap is formed between adjacent sheets and thus forming a fluid channel (col. 2, line 66-col. 3, line 4).

With respect to claim 11, Call et al. further disclose wherein the sheets are comprised of thin metallic plates (reads on metal foil) (col. 6, lines 43-46, col. 8, lines 27-29 and col. 11, lines 35-37).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Call et al. (6,488,900) as applied to claim 1 above, and further in view of Wang et al. (5,552,051).

Call et al. discloses all of the structure as described above in the apparatus for purifying air to deactivate toxic chemical and biological waste, but fails to disclose a chiller/cooling means in the thermal treatment zone to condense condensable compounds from the air.

Wang et al. also disclose an apparatus for removing toxic compounds from gas streams (col. 1, lines 8-16) and teaches wherein a condenser can be used to remove condensable compounds from the gas (col. 8, lines 10-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a condensing means as taught by Wang et al. in the thermal treatment zone of Call et al.

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in order to insure the removal of all toxic compounds in the gas stream by providing a means to remove the condensable toxic compounds.

Allowable Subject Matter

6. Claims 32-50 are allowed.
7. The following is a statement of reasons for the indication of allowable subject matter: The prior art neither teaches nor suggests an apparatus for thermally treating fluid as claimed, especially with regard to a thermal treatment zone being disposed within aligned orifices in the sheets of the claimed stacked plate heat exchanger.


Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexa A. Doroshenk whose telephone number is 571-272-1446. The examiner can normally be reached on Monday - Thursday from 9:00 AM - 7:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Alexa A. Doroshenk
Examiner
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